Listing of the Claims:

The following listing of claims will replace all prior versions and listings of claims presented in the application.

Claim 1. (Previously presented). A vaccine composition which is protective against equine arteritis virus (EAV) infections in horses and induces a cellular immune response, said vaccine comprises a nucleic acid encoding an EAV sequence consisting of open reading frame (ORF) 2, ORF 5 and ORF 7, wherein:

(1) ORF 2 is SEQ ID NO:2;

(2) ORF 5 is SEQ ID NO:5 or SEQ ID NO:9 (ORF 5); and

(3) ORF 7 is SEQ ID NO:7.

Claim 2. (Cancelled).

Claim 3. (Cancelled).

Claim 4. (Previously presented). The vaccine composition according to claim 1, wherein said nucleic acid is cDNA.

Claim 5. (Previously presented). The vaccine composition according to claim 1, wherein said vaccine composition comprises one or several nucleic acid vectors each encoding the EAV sequence(s) of claim 1.

Claim 6. (Previously presented). The vaccine composition according to claim 5, wherein said nucleic acid vector(s) is/are expression vector(s).

Claim 7. (Previously presented). The vaccine composition according to claim 6, wherein said expression vector(s) comprise(s) a eukaryotic cis-acting transcription/translation sequence functionally linked to the EAV sequence(s).

Claim 8. (Previously presented). The vaccine composition according to claim 7, wherein said expression vector(s) is/are selected from the group of pCR3.1, pcDNA3.1/His A, pcDNA3.1/His B, pcDNA3.1/His C, and pDisplay (pD).

Claim 9. (Previously presented). The vaccine composition according to claim 1, further comprising a nucleic acid encoding equine interleukin 2 (IL-2) or a vector or expression vector comprising said nucleic acid encoding IL-2.

Claim 10. (Previously presented). The vaccine composition according to claim 1, further comprising a pharmaceutically acceptable carrier or excipient.

Claim 11. (Previously presented). The vaccine composition according to claim 1, further comprising one or several adjuvants selected from the group of Muramyl Dipeptide (MDP), Montanide 720, Poly Inosine:Cytosine (Poly I:C) or plasmid DNA comprising unmethylated cytosine, guanine dinucleotide sequence motifs (CpG).

Claim 12. (Previously presented). The vaccine composition according to claim 1, further comprising:

(1) an expression vector comprising a nucleic acid encoding IL-2; and

(2) optionally a carrier, an excipient or an adjuvant.

Claim 13. (Cancelled).

Claim 14. (Previously presented). The vaccine composition according to claim 1, wherein the nucleic acid is encapsulated into cationic liposomes.

Claim 15. (Previously presented). A nucleic acid vector comprising a nucleic acid encoding an EAV sequence consisting of open reading frame (ORF) 2, ORF 5 and ORF 7 of EAV, wherein:

(1) ORF 2 is SEQ ID NO:2;

(2) ORF 5 is SEQ ID NO:5 or SEQ ID NO:9 (ORF 5); and

(3) ORF 7 is SEQ ID NO:7.

Claim 16. (Previously presented). The nucleic acid vector according to claim 15, wherein said nucleic acid is DNA.

Claim 17. (Previously presented). The nucleic acid vector according to claim 15, wherein said nucleic acid vector is an expression vector.

Claim 18. (Previously presented). The nucleic acid vector according to claim 17, wherein said expression vector comprises a eukaryotic cis-acting transcription/translation sequence functionally linked to said nucleic acid(s) specific for the EAV sequence of claim 15.

Claim 19. (Previously presented). The nucleic acid vector according to claim 17, wherein said expression vector is selected from the group of pCR3.1, pcDNA3.1/His A, pcDNA3.1/His B, pcDNA3.1/His C, and pDisplay (pD).

Claim 20. (Cancelled).

Claim 21. (Withdrawn). A method for prophylaxis or treatment of EAV infection in a horse, comprising (i) coating one or several nucleic acid vector(s) according to any one of claims 15 to 19 onto carrier particles; (ii) accelerating the coated carrier particles into epidermal cells of the horse in vivo; and (iii) inducing a protective or therapeutic immune response in said horse upon or after exposure to EAV; and (iv) monitoring the reduction of EAV-associated symptoms or the reduction of horizontal or vertical transmission.

Claim 22. (Withdrawn). The method according to claim 21, wherein the carrier particles are gold.

Claim 23. (Withdrawn). A method for prophylaxis or treatment of EAV infection in a horse, comprising (i) injecting a vaccine composition according to claim 1 or one or several nucleic acid vector(s) according to claim 15 into muscular cells of the horse in vivo; and (ii) inducing a protective or therapeutic immune response in said horse upon or after exposure to EAV, and (iii) monitoring the reduction of EAV-associated symptoms or the reduction of horizontal or vertical transmission.

Claim 24. (Previously presented). A vaccine composition which is protective against infections mediated by a member of *Arteriviridae* in an animal, wherein said vaccine composition induces a cellular immune response, wherein said vaccine composition comprises the EAV sequence according to claim 1, wherein said *Arteriviridae* is selected from the group consisting of equine arteritis virus (EAV), porcine reproductive and respiratory syndrome virus (PRRSV), and simian haemorrhagic fever virus (SHFV).

Claim 25. (Previously presented). A vaccine composition according to claim 24, wherein the animal is selected from the group consisting of a horse and a swine.